

REMARKS

Favorable reconsideration and allowance of the present application in view of the foregoing amendments and following remarks are respectfully requested.

Currently, claims 1-5 and 7-21 remain pending in the present application, including independent claims 1 and 12. Claim 1 is directed to an apparatus for cutting a web, while claim 12 is directed to a system for perforating a web. Claim 1 requires a mechanism for supporting a moving web, while claim 12 defines a web conveying means. Both claims further require a frame and at least three lasers mounted on the frame. As stated in claim 1, the plurality of lasers form an array across the web such that each successive laser in the array is adapted for providing a light beam upon a corresponding zone of the web. In this manner, the plurality of lasers work in conjunction in order to sever or perforate the web in the cross direction.

As stated in the specification, the apparatus and system of the present invention provide various advantages. For instance, by having a plurality of lasers positioned in an array across the web as defined in the claims, the apparatus and system is capable of accommodating not only a variety of web widths, but web widths greater than 100 or even 200 inches. Further, by using an array of lasers, a web may be perforated or severed while traveling at web speeds up to and in excess of 4,000 feet per minute. See, for instance, claims 15-17.

In the Office Action, independent claim 1 was rejected under 35 U.S.C. § 103 in view of Langhans while independent claim 12 was rejected under 35 U.S.C. § 103 over Langhans in view of Bingener. In view of the above claim amendments, however, it is believed that claims 1 and 12 patentably define over Langhans either alone or in combination with Bingener.

For instance, Langhans fails to disclose or suggest an apparatus or system for cutting a web in which the web is severed or perforated in the cross machine direction. Instead, Langhans is directed to a device for perforating cigarette paper strips in the machine direction. In fact, Langhans states in column 3 that the deviating mirrors 16 are "necessary" in the system shown in Figure 1 because "the paper strip extends parallel to the laser beam" i.e. in the machine direction. In fact, not only does Langhans teach machine direction perforations, but also teaches maintaining a laser in a fixed position as

opposed to providing an apparatus or a system in which a beam of light moves across the surface of a web in the cross direction of the web.

In addition, Langhans also fails to disclose or suggest a frame positioned, for instance, over a moving web for holding at least three lasers in an array across the web such that each successive laser in the array is adapted for providing a light upon a corresponding zone of the web.

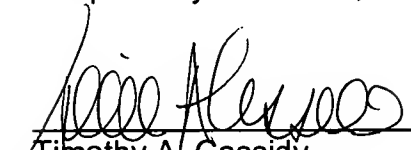
In the Office Action, Langhans was combined with Bingener in rejecting claim 12. The Office Action states that it would have been obvious to modify the apparatus disclosed in Langhans to have a perforation line in the cross direction of the web as suggested by Bingener. It was not explained in the Office Action or is it clear, however, how the apparatus in Langhans could somehow be modified in order to form perforations in the cross direction. In fact, the essence of the invention disclosed in Langhans is the formation of perforations in a cigarette paper in the same direction as the paper is moving. As described above, the apparatus in Langhans does not include any moving parts that would permit the perforations to be made in the cross machine direction. Instead, Langhans discloses a rotating mirror 12, a first lens system 14, a deviating unit 16, a system of diffractive optical elements 24 and a lens system 18 that are all configured specifically to form perforations only in the machine direction. Thus, not only is there no motivation, incentive or suggestion to modify the apparatus in Langhans as asserted in the Office Action, there is no teaching or disclosure as to how any such modification would occur. As such, it is respectfully submitted that it would not have been obvious to modify Langhans in view of Bingener.

In the Office Action, a new title of the invention was requested. Further, claims 1-11 were objected to under 35 U.S.C. § 112. In response, a new title is provided herewith and claim 1 has been amended in order to delete the word "or" in the preamble of claim 1.

In summary, it is believed that the present application as currently amended is in complete condition for allowance. Should any issues remain after consideration of this amendment, however, then Examiner Tawfik is invited and encouraged to telephone the undersigned at his convenience.

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Date

Respectfully submitted,


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